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Prof. Dr. E. Handschin
Studienreise auf den Sundainseln und in Nord-Australien.
1930-32.

On a Collection of Blattids, chiefly from Java and Northern Australia, made by Professor Ed. Handschin

by

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With 8 Text-Figures.

The greater part of the Blattids described below was taken by Professor Ed. Handschin in the years 1930 to 1932 in Java and the Northern Territory, Australia, whilst on a tour of scientific and industrial research. Only a few specimens represent material which had been accumulating in the Basel Museum, brought from Sumatra, Penang, Timor, the Solomon Is., Bougainville, New Britain and Japan. It was hardly to be expected that a collection made in Java, especially in the vicinity of Buitenzorg and Tjibodas, would produce many novelties. But it is different with the Northern Territory, Australia, and of the 16 species taken there, not less than 10 species are here described as new. The collection also contains one new species each from the Solomon Is. and from Bougainville.

LIST OF SPECIES.

Ectobiinae.

Mareta jacobsoni (Heb.)	Australia.
Mareta tricolor n. sp.	Australia.
Graptoblatta notulata (Stål)	Sumatra.
Plumiger histrio (Burm.)	Java.
Ellipsidion aurantium Sss.	Australia.
Ellipsidion laetum n. sp.	Australia.

Pseudomopinae.

Blattella bisignata (Br.)	Java.
Blattella luteo-marginata n. sp.	Australia.
Symploce bimarginalis n. sp.	Australia.
Symplocodes ridleyi (Shelf.)	Sumatra.
Supella supellectilium (Serv.)	Timor; Australia.
Margattea ceylonica (Sss.)	Java.
Sigmoidella debilis n. sp.	Australia.
Parajacobsonina atriceps n. g. and sp.	Australia.
Chorisoblatta megaspila (Wlk.)	Java.

Epilamprinae.

Rhabdoblatta procera (Br.)	Java.
Pseudophoraspis nebulosa (Burm.)	Java.
Epilampra paravicinii n. sp.	Solomon Is.
Epilampra sp.	Australia.

Blattinae.

Platyzosteria analis (Sss.)	Australia.
Platyzosteria alternans n. sp.	Australia.
Cutilia nitida (Br.)	New Britain.
Cosmozosteria zonata (Wlk.)	Australia.
Stylopyga rhombifolia (Stoll)	Penang.
Stylopyga fulvo-limbata n. sp.	Australia.
Periplaneta americana (L.)	Sumatra, etc.
Periplaneta picea Shir.	Japan.
Polyzosteria cuprea Sss.	Australia.
Polyzosteria limbata Burm.	Australia.

Panchlorinae.

Pycnoscelus surinamensis (L.)	Sumatra, etc.
Oniscosoma granicollis (Sss.)	Australia.

Corydinae.

Holocompsa debilis Wlk.	Java.

Oxyhaloinae.

Chorisoneura brunnea n. sp.	Australia.
Chorisoneura maculata n. sp.	Australia.
Choristima galerucoides (Wlk.)	Australia.

PANESTHIINAE.

Salganea morio (Burm.)	Java.
Panesthia javanica Serv.	Sumatra; Java.
Panesthia australis Br.	Australia.
Panesthia hamifera Han.	Solomon Is.
Panesthia undulata n. sp.	Bougainville.

ECTOBIINAE.

Mareta jacobsoni (Hebard.)

1929. *Allactina jacobsoni* Heb. — Proc. Acad. Nat. Sci., Philadelphia, vol. LXXXI, p. 19, pl. 11, fig. 1. [♀, Fort de Kock, Sumatra.]
2 ♂♂, Burnside, N. T., June 1931.

The two examples measure in total length only 7 mm. and 8 mm. respectively, as against 14 mm. in the case of the ♂ from Macassar, Celebes, which I recorded in Verh. Nat. Ges. Basel, Bd. XLIV, p. 123 (1933), and against 11,5 mm. both in the case of a ♂ from Kinabalu, B. N. Borneo (PENDLEBURY, 1929), and another ♂ from Kuching, Sarawak (SHELFORD, 1899). However, they quite agree in other characters.

Mareta tricolor [1] n. sp.

1 ♂, Burnside, N. T., May 1931.

♂. Head free; occiput pale brown, followed by a transverse white bar; vertex brick-red; face testaceous; palps and antennae testaceous; inter-ocular distance $^3/_5$ the width between antennal sockets. Pronotum broad, oval; disk circular, testaceous; lateral margins hyaline, very broad, nearly ½ the width of the disk. Tegmina exceeding the abdomen by ¼ their length, uniform pale testaceous; 15 costals, radial vein simple, about 10 slightly oblique discoidal sectors. Wings hyaline, distal part of costal area pale testaceous; veins almost colourless; mediastinal vein 3-ramose; 12 costals; radial vein simple, irregularly branching towards the apex; median vein simple; ulnar vein with 5 complete branches; apical triangle weakly developed. Body above pale orange. Supra-anal lamina triangular. Cerci testaceous. Body below dull testa-

[1] From the colour markings of the head.

ceous. Subgenital lamina deeply divided. Styles very short. Legs testaceous; front femora armed with piliform spines only.

♂. Total length 14 mm.

Allied to *Mareta (Blatta) contigua* Walker, with which it agrees by its size, pale straw-colour, broad hyaline margin of pronotum, and large number of branches of ulnar vein of the wings, but differs from it by the markings of the head which in *contigua* is testaceous, with a white cross-bar between the eyes.

Graptoblatta notulata (Stål.)

1858. *Blatta notulata* Stål. — Eugenie's Resa, Orthoptera, p. 308. [♂, Tahiti.]
1 ♂, Indragiri, Sumatra. A. v. Méchel, 1899.

I have recorded this widely distributed species from the Malay Peninsula, Sumatra, Java, Borneo, Cocos Keeling Is., Kei Is., and Hawaii (Tijdschr. Entom., vol. LXXII (1929), p. 279).

Plumiger histrio (Burmeister.)

1838. *Thyrsocera histrio* Burm. — Handb. Entom., vol. II, p. 499 [Java].
3 ♀♀. Buitenzorg, Java. Feb. and Nov. 1931.

Known from all parts of Malaysia and Celebes.

Ellipsidion aurantium Saussure.

1864. Rev. Zool. (2), vol. XVI, p. 312 [Australia].
2 ♂♂, 1 ♀, Burnside, N. T. April 1931.
2 ♀♀, Z-Lagoon, N. T. April 1931.
1 ♀, Marrakai, N. T. and 1 ♀, Katherine, N.T. May 1931.

On account of its divided sub-genital lamina, the armature of the front femora with piliform spines only, and its plumose antennae I have removed the genus *Ellipsidion* Saussure, from the *Pseudomopinae* to the *Ectobiinae* and have placed it next to *Plumiger* Hebard.

One of the ♀ specimens, from Katherine, N. T., has the ootheca far projecting from the body, the distal end of which, together with the tips of the tegmina, are covered with apparently recently hatched young ones. Shelford, in his « A Naturalist in Borneo », 1916, p. 117, reports two species of viviparous Cockroaches, which carry their young, viz. *Phlebonotus pallens* Serville, from India,

and *Pseudophoraspis nebulosa* Burm., from the Malayan region. Dr. Hem Singh Pruthi, of the Zoological Survey of India, recently sent me a female of *Phlebonotus pallens*, with young under its wings, which he had captured in a small stream near Yercaud (ca. 1350 m., Shevroy Hills, S. India). A ♀ specimen of *Perisphaeria glomeriformis* Lucas, from the Philippines, lent to me by Prof. Sjöstedt, also has nymphs clinging to its under surface.

Ellipsidion laetum n. sp.

1 ♂. Burnside, N. T. April 1931.

♂. Head free, pale orange; antennae hirsute, basal half black (distal half lost); inter-ocular distance equal to width between antennal sockets. Pronotum broad, with the anterior margin parabolic, posterior margin sub-truncate; disk bright yellow, lateral margins broad, hyaline. Tegmina exceeding the abdomen by $^1/_4$ their length, pale orange; mediastinal area hyaline, costal margin slightly hyaline; 16 costals; radial vein simple for the first $^4/_5$ of its course, then irregularly breaking up; about 10 oblique discoidal sectors; right tegmen with the portion covered by the left tegmen, deeply infuscated. Wings fuscous, centre of costal area bright yellow, apex shining black; mediastinal vein very long, exceeding $^3/_4$ of the wing length, 4-ramose; only 7 or 8 costals, median vein simple, ulnar vein forking at $^2/_3$ of its course, the anterior branch forking again; apical triangle small, but distinct, light in colour. Abdomen above deep yellow, below shining black, each abdominal sternite with white lateral and posterior borders. Cerci pale orange. Sub-genital lamina deeply cleft, a small style at the apex of each lobe. Legs pale yellow, with the exception of the median and hind coxae, parts of which are shining black; front femora armed with piliform spines only.

♂. Total length 11 mm.

This species is somewhat smaller than *E. aurantium* and can be distinguished by the uniform orange head, the broad hyaline margin of pronotum and tegmina, by the wings which have only a small orange patch at the costal margin, and by the abdominal sternites having not only posterior, but also lateral white borders.

Pseudomopinae.

Blattella bisignata (Brunner.)

1893. *Phyllodromia bisignata* Br. — Ann. Mus. Civ., Genova, vol. XXXIII, p. 15, pl. I, fig. 1 [Burma].

1 ♂, 1 ♀, Buitenzorg, Java, Dec. 1930. — Feb. 1931.

1 ♀, Djember, Java, Feb. 1931; 1 ♀, Sêmpol, Idjen, Java, 2000 m., Feb. 1931; 1 ♀, Soe, Timor, Dec. 1931.

Blattella luteo-marginata n. sp.

1 ♂, Marrakai, N. T. May 1931.

♂. Head free, shining black; palps and antennae fuscous; interocular distance $^3/_4$ the width between antennal sockets. Pronotum broad, anterior margin parabolic, posterior margin sub-truncate; disk black, lateral margins narrow, hyaline. Tegmina exceeding the abdomen by $^1/_6$ their length, fusco-castaneous; mediastinal

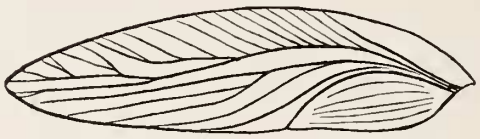

Fig. 1.
Blattella luteo-marginata n. sp. ♂.
Left tegmen.

and costal areas yellowish; 19 costals; radial vein bifurcate at its middle, the posterior half branching irregularly; 5 longitudinal discoidal sectors. Wings hyaline, veins colourless, only the costal area and apex slightly infuscated, mediastinal vein biramose; 10 costals, their ends slightly swollen and darker; radial vein bifurcate at $^3/_4$ from its base; median vein simple; ulnar vein bifurcate from its middle; apical triangle well developed. Abdomen above testaceous, sides broadly fuscous. Supra-anal lamina triangular, apex blunt. Cerci dark fuscous. Body below reddish-testaceous. Sub-genital lamina large, rounded, with one style only, on the left side. Legs testaceous; front femora armed after type A.

♂. Total length 10 mm.

Closely allied to *B. albo-marginata* Hanitsch, from Samarang, Java (Stettin. Entom. Zeit., vol. XCI (1930), p. 181), but differing from it by having the ulnar vein of the wing bifurcate, instead of simple, by having the apical triangle well developed and possessing one style, whilst the Javanese species has none.

Symploce bimarginalis n. sp.

1 ♀, Burnside, N. T. May 1931.

♀. Head free, pale testaceous, forehead with a black spot; inter-ocular distance ½ the width between antennal sockets; antennae fusco-testaceous; palps testaceous, terminal joint brown. Pronotum with the anterior margin parabolic, posterior margin bluntly angled; disk testaceous, with a broad black border on either side; lateral margins broadly hyaline. Tegmina exceeding the abdomen by ¼ their length, hyaline to pale testaceous; 22 costals; radial vein forked at ¾ of its course; 8 longitudinal discoidal sectors; 5 anals. Wings hyaline, costal area distally yellowish; mediastinal vein 4-ramose; 9 costals, the last two multi-ramose; radial vein forked at $^3/_5$ of its course; median vein simple; ulnar vein with 2 complete and 2 incomplete branches; apical triangle moderate. Supra-anal lamina deeply divided into two sharply-pointed triangular lobes. Cerci testaceous above, white and black banded below. Body below testaceous. Legs testaceous; front femora armed after type A.

♀. Total length 13 mm.

Readily distinguished by the black border of the pronotal disk from the other known species of *Symploce* Hebard.

Symplocodes ridleyi (Shelford.)

1912. *Hemithyrsocera ridleyi* Shelf. — Trans. Ent. Soc., London, p. 660, pl. LXXX, fig. 15. [♂, Singapore.]

1 ♀, Indragiri, Sumatra. A. v. Méchel, 1899.

Supella supellectilium (Serville.)

1839. *Blatta supellectilium* Serv. — Hist. Ins. Orth., p. 114.

1 ♀, Koepang, Timor. Dec. 1931.

1 (sex ?), Port Darwin, N. T. April 1931.

Cosmopolitan.

Margattea ceylonica (Saussure.)

1868. *Blatta ceylonica* Sauss. Rev. Zool., (2), vol. XX, p. 355. Ceylon.
1 ♀, Buitenzorg, Java, Nov. 1930.

This is apparently the first record from Java. Otherwise this species has been reported from all parts of Malaysia, besides from Ceylon. — *Phyllodromia nimbata* Shelf. is synonymous with it.

Sigmoidella debilis n. sp.

1 ♂, Marrakai, N. T. May 1931.

♂. Head free, vertex and forehead pale castaneous, shading to testaceous on the lower face; antennae and palps fuscous; interocular distance nearly equal to width between antennal sockets. Pronotum with the anterior margin rounded, posterior margin faintly produced; yellowish-testaceous, with two broad castaneous

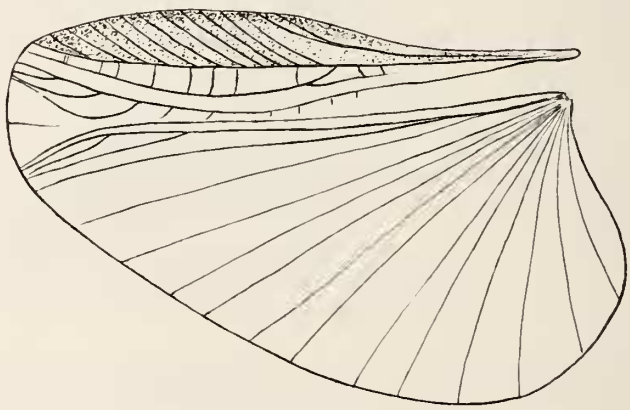

Fig. 2.
Sigmoidella debilis n. sp. ♂.
Left wing.

stripes, connected behind by a somewhat darker narrow transverse bar. Tegmina exceeding the abdomen by $^1/_5$ their length, uniform dark amber, 17 costals, radial vein simple, 6 longitudinal discoidal sectors. Wings yellowish hyaline, costal area and apex slightly darker; mediastinal vein 2-ramose; 13 costals, thickened, but not clubbed; radial vein simple; median vein simple; ulnar vein slightly

sigmoid, with 3 short complete branches, 2 very short rudimentary branches and several short transverse venules in that region; apical triangle strongly developed. Cerci testaceous above, fuscous below. Body below fusco-testaceous. Sub-genital lamina very small, triangular, with two minute styles near the apex. Legs testaceous, front femora armed after type B.

♂. Total length 9 mm.

I have placed this species under *Sigmoidella* Hebard [1], though the ulnar vein of its wings is only slightly sinuate. Otherwise it agrees with that genus by the armature of the front femora after type B, by the radial vein of tegmina and wings being simple, and by the ulnar vein of the wings having rudimentary incomplete branches in addition to the complete branches. By the markings of the pronotum it is near to *S. (Blatta) adversa* Saussure and Zehntner. However, the latter is a very much larger species, measuring about 17 mm. in total length.

Parajacobsonina n. g.

This genus comes near *Jacobsonina* Hebard, [2] agreeing with it (1) by the front femora being armed after type B and distally bearing 3 heavy spines, (2) by the sides of the face converging ventrally, and (3) by the radial vein of the tegmina being forked, whilst that of the wings is simple; it differs from it (1) by the presence of styles, (2) by the ulnar vein of the wings being simple, and (3) by the discoidal sectors of the tegmina being oblique, instead of longitudinal.

Parajacobsonina atriceps n. sp.

1 ♂, Burnside, N. T. 22.IV.1932.

♂. Head slightly free, shining black; lower part of clypeus, labrum, palps and antennae testaceous; inter-ocular distance

[1] Proc., Acad. Nat. Sci., Philadelphia, vol. LXXXI (1929), p. 55. — Hebard, in defining *Sigmoidella*, speaks of the "strongly sinuate discoidal vein of the wings", where, no doubt, the ulnar vein is meant. Compare *loc. cit.*, p. 39.

[2] Hebard, *loc. cit.*, p. 56. The definition of this genus contains an obvious slip: where the author speaks of the « forked discoidal vein of the wings », no doubt, the tegmina are meant. Compare the key on p. 39. — Also the spelling "*Jacobsonia*", on p. 57, should be corrected to "*Jacobsonina*". See pp. 39 and 56.

$^3/_4$ the width between antennal sockets. Pronotum much broader than long, anterior margin parabolic, posterior margin slightly convex; disk testaceous to pale orange, lateral margins broadly hyaline. Tegmina exceeding the body by $^1/_6$ their length, hyaline testaceous; 16 costals, radial vein bifurcate from the level of the 3rd costal; 9 oblique discoidal sectors. Wings hyaline, near apex

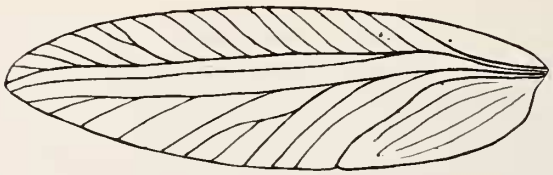

Fig. 3.
Parajacobsonina atriceps n. g. n. sp. ♂.
Left tegmen.

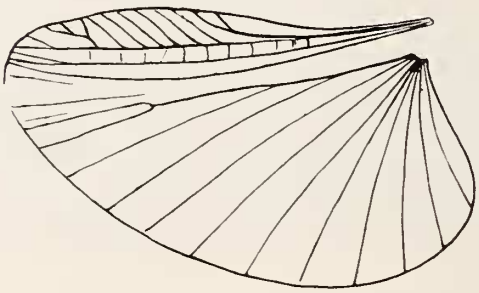

Fig. 4.
Parajacobsonina atriceps n. g. n. sp. ♂.
Left wing.

yellowish suffused; mediastinal vein bifurcate, 10 costals, radial vein simple, median vein forked terminally, ulnar vein simple, apical triangle well developed. Body above pale testaceous. Cerci dark testaceous. Body below pale testaceous. Sub-genital lamina triangular, slightly asymmetrical, the left side stronger developed, with one style only, on the left. Legs whitish testaceous; front femora armed after type B; hind femora heavily spined.

♂. Total length 9 mm.

Chorisoblatta megaspila (Walker.)

1868. *Blatta megaspila* Wlk. — Cat. Blatt. B. M., p. 98. [♀, Java.]
1 ♀, Tjibodas, Java, 1400-1600 m. Aug. 1931.

Distribution: Besides Java, also Malay Peninsula and Borneo. Not known yet from Sumatra, but taken by KARNY on Siberut, Mentawi Is., Sept. 1924, 1 ♂.

EPILAMPRINAE.

Rhabdoblatta procera (Brunner.)

1865. *Epilampra procera* Br. — Nouv. Syst. Blatt., p. 192 [Java].
1 ♂, 1 ♀, Buitenzorg, Java. Jan. 1931.

Distribution: the whole of Malaysia and Celebes.

Pseudophoraspis nebulosa (Burmeister.)

1838. *Epilampra nebulosa* Burm. — Handb. Entom., vol. II, p. 505 [Java].
1 ♀, Salak, Java, 1000 m. Dec. 1930.

Distribution: the whole of Malaysia.

Epilampra paravicinii n. sp.

1 ♀, Buma (Malaita), Solomon Is. E. PARAVICINI, May 1929.

♀. Head free, testaceous, frons with a large black club-shaped macula, filling the space between the eyes, narrowing to a broad vertical streak at the level of the antennal sockets, and continuing down to the clypeus; palps fusco-testaceous; antennae light brown; inter-ocular distance $^4/_5$ the width between antennal sockets. Pronotum with the anterior margin parabolic, posterior margin obtusely angled; smooth, not punctured; testaceous, mottled with large and small reddish brown spots and dots, and a series of about 10 dark castaneous streaks along the posterior margin. Tegmina exceeding the abdomen by barely $^1/_6$ their length, testaceous, mottled with indefinite smallish reddish brown dots and a more definite series of black spots along the radial vein. Wings reddish testaceous. Supra-anal lamina bilobed. Cerci banded dark and light brown. Abdomen below testaceous, closely packed with reddish-brown spots and blotches. Legs pale reddish-brown,

middle and hind coxae with small round dots; hind tibiae dark brown; posterior metatarsus much longer than the remaining joints together, entirely spined; 1st and 2nd tarsal joints also spined.

♀. Total length 34 mm.; body 29 mm.; pronotum 8,2 × 11 mm.; tegmina 28 mm.

Epilampra sp.

1 ♀ nymph. Burnside, N. T. May 1931.

♀. General colour brown. Head pale yellowish, with a broad black bar between the eyes; face with a T-shaped mark; pronotum with disk brownish, lateral margins pale orange, with ferruginous pustules; pronotum, mesonotum, metanotum and abdominal tergites all with a series of rugosities along their posterior margin.

♀. Total length 20 mm.

Blattinae.

Platyzosteria analis (Saussure.)

1864. *Polyzosteria analis* Sss. — Rev. Zool. (2), vol. XVI, p. 305 [Australia].

1 ♀, Cooma, N. S. W. 6-IX-1930.

Platyzosteria alternans n. sp.

1 ♂. Z-Lagoon, N. T. April 1931.

♂. Apterous. — Head covered, shining black, in parts reddish suffused; palps and antennae black; inter-ocular distance $^4/_5$ the width between antennal sockets. Pronotum much broader than long, anterior margin sub-truncate, sides rounded, posterior margin faintly produced; centre of disk dark red, bordered with black; margined all round with bright yellow. Mesonotum and metanotum coloured similar to the pronotum, *viz.* red in the centre, bordered by black at the sides and behind, lateral and posterior margins bright yellow. Abdominal tergites bright yellow, with a broad black band running along the anterior margin of each, but not quite reaching the sides. Supra-anal lamina sub-triangular, with shallow emargination; basal half black, distal half yellow. Cerci orange. Abdomen below black, each sternite at the sides and behind margined cream-white. Sub-genital lamina transverse,

short, black. Styles very small, orange. Legs multi-colorous: coxae black, with whitish outer border; femora black, with deep orange border; front tibiae almost black; mid and hind tibiae deep orange, their distal ends black; tarsi black.

♂. Total length 11,5 mm.; pronotum 3,7 × 7 mm.

Near *Platyzosteria cingulata* Shaw, from Queensland (Proc. Linn. Soc., N. S. W., vol. XLVII (1922), p. 226). However, the central portion of pronotum, mesonotum and metanotum of the latter species is of a uniform black, with no red centre, and the black anterior margins of the abdominal tergites are continued to the sides, whilst in *alternans* they stop at some distance from there.

For a key of the species of *Platyzosteria* Brunner, see Shelford, Studies of the Blattidae, Trans. Ent. Soc., London, 1909, part II, pp. 265-289.

Cutilia nitida (Brunner.)

1865. *Platyzosteria nitida* Br. — Nouv. Syst. Blatt., p. 214. [Amboina; Ternate.]

5 ♂♂, 2 ♀♀, Mövehafen, New Britain. H. Hediger, 1930.

Common throughout the Malay Archipelago, Formosa and N. S. Wales.

Cosmozosteria zonata Walker.

1868. *Polyzosteria zonata* Wlk. — Cat. Blatt. B. M. p. 159. [Port Essington, N. T.]

5 ♂♂, 4 ♀♀, Kadarri, N. T. April 1931.

1 ♂, Burnside, N. T. April 1931.

Shelford, in Genera Insectorum, *Blattinae* (1910), p. 9, gives its distribution as "Queensland; South Australia".

Stylopyga rhombifolia (Stoll.)

1813. *Blatta rhombifolia* Stoll. — Spectres, Blatt., p. 5, pl. III, 3*d*, fig. 13.

1 ♂ nymph, Penang (Coll. Mns. Basel).

Cosmopolitan.

Stylopyga fulvo-limbata n. sp.

2 ♂♂, Kadarri, N. T., April 1931. — 1 ♀, Burnside, N. T., April 1931.

♂. Apterous. General colour deep castaneous, bordered all round with fulvous. — Head freely exposed, yellowish orange;

vertex with transverse broad black band, connecting the eyes; face with a vertical broad black streak; palps testaceous; antennae brown; inter-ocular distance $^2/_3$ the width, between antennal sockets. Pronotum with the anterior margin parabolic, posterior margin sub-truncate; disk shining deep castaneous to black, on either side a broad yellow border which, though much narrower, is for a short distance continued along the posterior margin towards the middle line; lateral margins of pronotum narrow, black. Mesonotum with the central portion black, on either side broadly bordered with fulvous; lateral margins narrow, black. Metanotum similar to the mesonotum, but with the black portion constricted posteriorly, allowing the fulvous lateral border to spread partly along the posterior margin. Abdominal tergites coloured like the mesonotum. Supra-anal lamina trapezoidal, posterior margin broadly excised; black, apex reddish. Cerci castaneous. Abdomen below uniform castaneous. Sub-genital lamina broadly triangular. Styles stout, short. Fore legs dull fulvous to castaneous; middle and hind legs reddish castaneous; posterior metatarsus in length much exceeding the remaining joints, spined for the greater part; 1st and 2nd tarsal joints also spined.

The ♂ paratype has the legs considerably lighter than the type. — The ♀ resembles the ♂ in most particulars, but is somewhat larger and has the front coxae distinctly bicolorous, *viz.* fulvous, with a large black patch near the base.

	♂	♀
Total length	18 mm.	21 mm.
Pronotum	6,5 × 10 mm.	6,2 × 10 mm.

Near *Stylopyga ornata* Brunner, from India (Nouv. Syst. Blatt., 1865, p. 225), but differing from it by being apterous, and by the yellow lateral margins being continuous from the pronotum to the end of the abdomen, not interrupted by black interstices.

Periplaneta americana (L.)

1758. *Blatta americana* L. — Syst. Nat., ed. X, p. 424.
1 ♂, Indragiri, Sumatra. A. v. Méchel, 1899.
1 ♀, Buitenzorg, Java. Dec. 1930.
2 ♂♂, 1 ♀, Burnside, N. T. Apr.-May 1931.

Cosmopolitan.

Periplaneta picea Shiraki.

1906. Annot. Zool. Japon., vol. VI. p. 26. pl. II. fig. 3. [Japan.
1 ♂, Yokohama. R. Merian.

Polyzosteria cuprea Saussure.

1864. Mém. Soc. Sc. Phys. Nat. Genève. vol. XVII. p. 133. pl. 1. fig. 2. [Swan River, Australia.]
1 ♀, Burnside Stn., Brock's Creek. N. T., 18.III.1932.

Polyzosteria limbata Burmeister.

1838. Handb. Entom., vol. II. p. 483. [Australia.]
1 ♂, Sydney.

Panchlorinae.

Pycnoscelus surinamensis (L.)

1767. *Blatta surinamensis* L. — Syst. Nat., ed. XII. p. 687. [Surinam.]
1 ♂, Indragiri, Sumatra. A. v. Méchel, 1902.
1 ♀, Ru Avatu, Guadalcanab, Solomon Is. Paravicini, Oct. 1928.
1 ♀ nymph, Endeh, Flores. Dec. 1931.
2 ♀, Buitenzorg, Dec. 1930. Soë, Timor; Koepang Timor, Dec. 1931.
3 ♀, Port Darwin. June 1931.
Cosmopolitan.

Oniscosoma granicollis (Saussure.)

1862. *Zetobora granicollis* Sss. — Rev. Zool. (2), vol. XIV, p. 232. [Australia.]
3 ♂♂, 3 ♂♂ nymphs, 5 ♀♀, Blundells, Canberra, Australia, 10.X.1930.

The systematic position of *Oniscosoma* is somewhat doubtful. Kirby places it amongst the *Panchlorinae*, but Shelford, in MS notes to Kirby's catalogue, says "better placed in *Perisphaerinae*".

Corydinae.

Holocompsa debilis Walker.

1868. Cat. Blatt. B. M., p. 192. [♂, Sarawak.]
1 ♂, Buitenzorg. Java. Dec. 1930.

Widely distributed through Malaysia, also Ceylon and Philippines. See Tijdschr. Entom., vol. LXXII (1929), p. 299.

Oxyhaloinae.

Chorisoneura brunnea n. sp.

1 ♂, Burnside, N. T. April 1931.

♂. Head free, black; palps and antennae testaceous; interocular distance $^3/_5$ the width between antennal sockets. Pronotum sub-oval, finely granular, dark brown, lateral margins somewhat

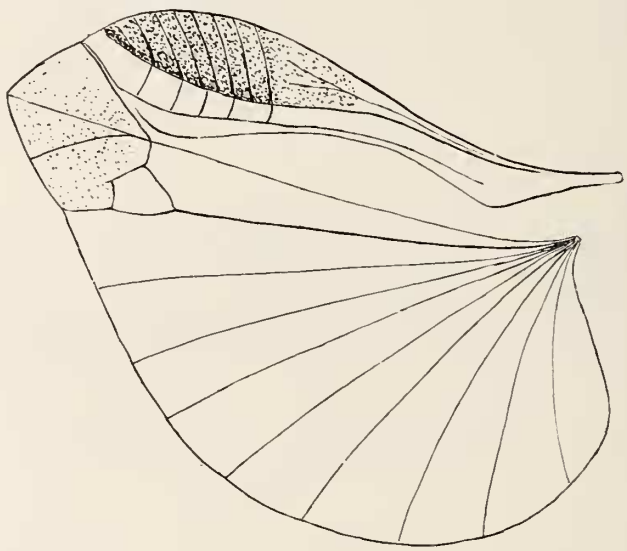

Fig. 5.
Chorisoneura brunnea n. sp. ♂.
Left wing.

lighter. Tegmina just exceeding the abdomen, finely granular, light brown, mediastinal area darker; 11 costals; radial vein simple; discoidal sectors oblique, more a less obsolete. Wings hyaline, costal and apical areas fuscous; 9 costals, radial vein simple, median vein simple, medio-discal field with 5 transverse venules, ulnar vein simple; apical area prominent, projecting for some distance beyond the costal area; dividing vein forking just after entering the apical area; 1st axillary vein forking and anas-

tomosing just before reaching the apical area. Cerci brownish. Body below shining light castaneous; sub-genital lamina transverse, oval. Styles minute, colourless. Legs reddish testaceous.

♂. Total length 5 mm.

Chorisoneura maculata n. sp.

1 ♀, Burnside, N. T. Apr. 1931.

♀. Head covered, black, with a brownish patch between the eyes; palps testaceous; base of antennae pale fuscous, remainder darker; inter-ocular distance ½ the width between antennal

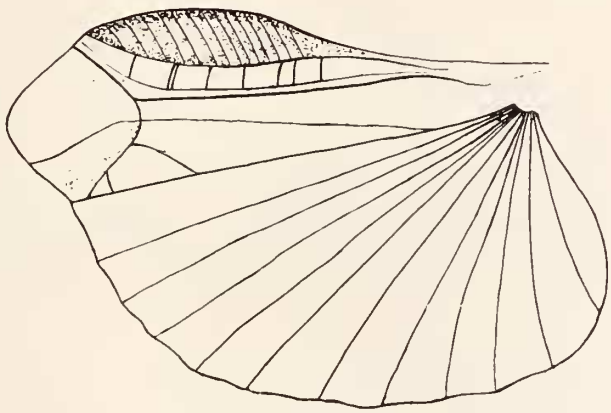

Fig. 6.
Chorisoneura maculata n. sp. ♀.
Left wing.

sockets; pronotum broader than long, anterior margin parabolic, posterior margin rounded; shining deep black, anterior two-thirds of the lateral margins whitish-hyaline. Tegmina exceeding the abdomen by $^1/_5$ their length; dark fuscous to black, with irregular whitish-hyaline blotches; the one covering the mediastinal and most of the costal area, the other, the posterior third of the anal area and slightly exceeding it; 11 costals, radial vein simple, discoidal sectors oblique, almost obsolete. Wings fusco-hyaline, costal and apical areas darker; 15 costals; radial vein simple; median vein simple; 7 transverse venules in medio-discal field; ulnar vein simple, very stout; dividing vein simple, traversing the

apical area which is well developed and projects beyond the costal area; 1st axillary vein forking and anastomosing just behind the apical area. Abdomen below shining black, each segment with a pair of marginal white spots. Legs cream-white for the greater part, with scattered black markings.

♀. Total length 6 mm.

Choristima galerucoides (Walker.)

1868. *Diploptera galerucoides* Wlk. — Cat. Blatt. B. M., p. 57. [Tasmania.]
1 ♀, Blundells, Canberra, Australia. 10.X.1930.

Panesthiinae.

Salganea morio (Burmeister.)

1838. *Panesthia morio* Burm. — Handb. Entom., vol. II, p. 513. [Java.]
1 ♂, Buitenzorg, Java. Oct. 1931.

Distribution: the whole of Malaysia. Recorded by Brunner also from Ceylon and Amboina, and by Kirby from Australia and New Guinea.

Panesthia javanica Serville.

1831. Ann. Sci. Nat., vol. XXII, p. 38. [Java.]
1 ♂, 1 ♀ nymph, Tavang Taloe, C. Sumatra.
1 ♂ nymph, Indragiri, Sumatra. A. v. Mechel, 1899.
1 ♂ nymph, Sêmpol, Idjen, Java, 2000 m. Feb. 1931.

Distribution: the whole of Malaysia and exceedingly common.

Panesthia australis Brunner.

1865. Nouv. Syst. Blatt., p. 396. [Sydney; Moreton Bay.]
2 ♂♂, 1 ♀ nymph, Cooma, N. S. Wales. 5.IX.1930.
1 ♂, 1 ♀, Jinderbayne, Cooma, N. S. W., 6.IX.1930.
1 ♀, Blundells, Canberra, 26.IX.1930.

Panesthia hamifera Hanitsch.

1931. Mém. Mus. R. Belg. (hors série), vol. IV, p. 59, text-fig. 6, pl. I, fig. 7. [New Guinea; Sumatra.]
Nymphs: 1 ♂, 2 ♀♀, Domma, Solomon Is. Paravicini, Aug. 1928:
1 ♂, Veisali, Solomon Is., July 1928.

Panesthia undulata n. sp.

1 ♀, Buin, Bougainville. H. Hediger, 1930.

♀. Black, suffused with deep castaneous. — Head freely exposed, dull black; clypeus light brown; base of labrum cream-yellow,

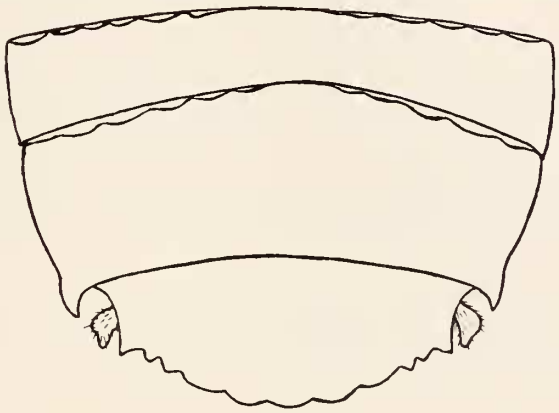

Fig. 7.
Panesthia undulata n. sp. ♀.
End of abdomen from above.

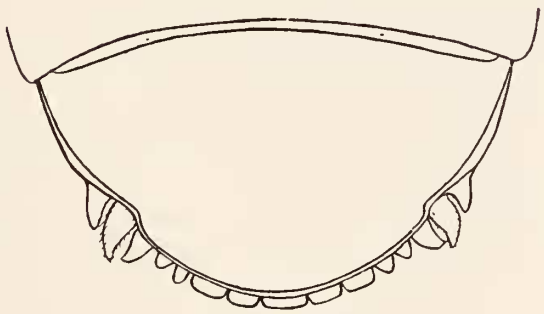

Fig. 8.
Panesthia undulata n. sp. ♀.
End of abdomen from below.

remainder reddish castaneous; palps and antennae black; interocular distance nearly equal to width between antennal sockets. Pronotum with the anterior margin shallow excavated; sides rounded; posterior margin truncate; anterior part of disk depressed,

posterior part irregularly raised and swollen. Tegmina and wings mutilated (probably fully developed in perfect specimens). Anterior abdominal tergites nearly smooth, with scattered shallow punctures only, the punctures increasing in numbers, size and depth in the posterior tergites; 6th and 7th tergites at their anterior margin with a narrow, undulating sulcus. Supra-anal lamina with dense ferruginous pubescence (mostly worn away); posterior margin with undulating crenulations, *viz.* 5 larger ones in the middle, followed on either side by two smaller ones, and finally at either extreme end a large blunt tooth. Cerci short, conical, with ferruginous pubescence beneath. Abdomen below castaneous in front, black behind. Legs with coxae, femora and tarsi castaneous, tibiae black; front femora with 2 spines each.

♀. Total length 34 mm.; pronotum 7,5 × 11 mm.

The undulating, wave-like crenulations of the supra-anal lamina, together with the similarly formed sulci of the 6th and 7th tergites, are very characteristic of this species.